16/10/200316:24protein purification.trn

FULL ESTIMATED COST 0.06 0.69

FILE 'CAPLUS' ENTERED AT 11:17:00 ON 02 OCT 2003
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FILE COVERS 1907 - 2 Oct 2003 VOL 139 ISS 14
FILE LAST UPDATED: 1 Oct 2003 (20031001/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> E GONZALEZ VILLASENOR LUCIA IRENE/AU 25
E1            1     GONZALEZ VILLASENOR IRENE/AU
E2            5     GONZALEZ VILLASENOR L I/AU
E3           10 --> GONZALEZ VILLASENOR LUCIA IRENE/AU
E4            2     GONZALEZ VILLEGAS S/AU
E5            2     GONZALEZ VILLELA REBECA/AU
E6            1     GONZALEZ VINAS M/AU
E7           14     GONZALEZ VINAS M A/AU
E8            1     GONZALEZ VINAS MIGUEL A/AU
E9            2     GONZALEZ VINAS MIGUEL ANGEL/AU
E10           4     GONZALEZ VINAS W/AU
E11          12     GONZALEZ VIRGILIO/AU
E12           3     GONZALEZ VIRGILIO A/AU
E13           2     GONZALEZ VIRGILIO LUIS/AU
E14           2     GONZALEZ VIRGILIO MENDOZA/AU
E15           1     GONZALEZ VIRGINIA/AU
E16           1     GONZALEZ VIRGINIA M/AU
E17           2     GONZALEZ VIRNA/AU
E18           1     GONZALEZ VISITACION LOPEZ MIRANDA/AU
E19           1     GONZALEZ VIVEROS M TERESA/AU
E20           4     GONZALEZ W/AU
E21           2     GONZALEZ W A/AU
E22           7     GONZALEZ W D/AU
E23          17     GONZALEZ WALTER/AU
E24           2     GONZALEZ WALTER D/AU
E25           1     GONZALEZ WALTTER LOPEZ/AU

=> S (E3) AND 0000<=PY<=2001
            10 "GONZALEZ VILLASENOR LUCIA IRENE"/AU
      21538624 0000<=PY<=2001
L1            9 ("GONZALEZ VILLASENOR LUCIA IRENE"/AU) AND 0000<=PY<=2001

=>  d ti 1-9
```

16/10/200316:24protein purification.trn

L1 ANSWER 1 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Antibodies for growth hormone and prolactin using multiple antigen peptide immunogens

L1 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Screening for specific recombinant clones

L1 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Effect of growth hormone on the growth rate of the gilthead seabream (Sparus aurata), and use of different constructs for the production of transgenic fish

L1 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Mitochondrial DNA restriction site polymorphisms in the teleost Fundulus heteroclitus support secondary intergradation

L1 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Gene transfer, expression and inheritance of pRSV-rainbow trout-GH cDNA in the common carp, Cyprinus carpio (Linnaeus)

L1 ANSWER 6 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Molecular cloning and sequencing of coho salmon growth hormone cDNA

L1 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI Characterization of cloned mitochondrial DNA from the teleost Fundulus heteroclitus and its usefulness as an interspecies hybridization probe

L1 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI A multilocus system for studying tissue and subcellular specialization. The pH and temperature dependence of the two major NADP-dependent isocitrate dehydrogenase isoenzymes of the fish Fundulus heteroclitus

L1 ANSWER 9 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
TI A multilocus system for studying tissue and subcellular specialization. The three NADP-dependent isocitrate dehydrogenase isozymes of the fish Fundulus heteroclitus

=> d ab 2

L1 ANSWER 2 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
AB A review with 207 refs. on the application of nucleic acid and antibody probes for screening specific recombinant clones isolated from recombinant libraries. Topics include: section of a DNA library for screening recombinant clones; cloning of large genes and gene clusters; screening by nucleic acid hybridization; use of synthetic oligonucleotide probes; screening by PCR; screening on the basis of expressed protein by ligand binding activity and immunol. methods.

=> e2
L2 5 "GONZALEZ VILLASENOR L I"/AU

=> d ti 1-5

L2 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI A solid phase plate assay for HIV-1 genotyping

L2 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN

FILE COVERS 1907 - 7 Oct 2003 VOL 139 ISS 15
FILE LAST UPDATED: 6 Oct 2003 (20031006/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

```
=> E GONZALEZ VILLASENSOR LUCIA/AU 25
E1            5     GONZALEZ VILLASENOR L I/AU
E2           10     GONZALEZ VILLASENOR LUCIA IRENE/AU
E3            0 --> GONZALEZ VILLASENSOR LUCIA/AU
E4            2     GONZALEZ VILLEGAS S/AU
E5            2     GONZALEZ VILLELA REBECA/AU
E6            1     GONZALEZ VINAS M/AU
E7           14     GONZALEZ VINAS M A/AU
E8            1     GONZALEZ VINAS MIGUEL A/AU
E9            2     GONZALEZ VINAS MIGUEL ANGEL/AU
E10           4     GONZALEZ VINAS W/AU
E11          12     GONZALEZ VIRGILIO/AU
E12           3     GONZALEZ VIRGILIO A/AU
E13           2     GONZALEZ VIRGILIO LUIS/AU
E14           2     GONZALEZ VIRGILIO MENDOZA/AU
E15           1     GONZALEZ VIRGINIA/AU
E16           1     GONZALEZ VIRGINIA M/AU
E17           2     GONZALEZ VIRNA/AU
E18           1     GONZALEZ VISITACION LOPEZ MIRANDA/AU
E19           1     GONZALEZ VIVEROS M TERESA/AU
E20           4     GONZALEZ W/AU
E21           2     GONZALEZ W A/AU
E22           7     GONZALEZ W D/AU
E23          17     GONZALEZ WALTER/AU
E24           2     GONZALEZ WALTER D/AU
E25           1     GONZALEZ WALTTER LOPEZ/AU

=> (E1 and E2) and NaOH
             5 "GONZALEZ VILLASENOR L I"/AU
            10 "GONZALEZ VILLASENOR LUCIA IRENE"/AU
        335406 NAOH
             3 NAOHS
        335407 NAOH
                 (NAOH OR NAOHS)
L1           0 ("GONZALEZ VILLASENOR L I"/AU AND "GONZALEZ VILLASENOR LUCIA
               IRENE"/AU) AND NAOH

=> (E1 and E2) and NaOH
             5 "GONZALEZ VILLASENOR L I"/AU
            10 "GONZALEZ VILLASENOR LUCIA IRENE"/AU
        335406 NAOH
             3 NAOHS
        335407 NAOH
                 (NAOH OR NAOHS)
L2           0 ("GONZALEZ VILLASENOR L I"/AU AND "GONZALEZ VILLASENOR LUCIA
```

16/10/200316:24protein purification.trn

```
               IRENE"/AU) AND NAOH

=> (E1 and E2) and (inclusion with bodies)
             5 "GONZALEZ VILLASENOR L I"/AU
            10 "GONZALEZ VILLASENOR LUCIA IRENE"/AU
         93495 INCLUSION
         58928 INCLUSIONS
        130960 INCLUSION
                 (INCLUSION OR INCLUSIONS)
         98599 BODIES
          5004 INCLUSION WITH BODIES
                 (INCLUSION(1W)BODIES)
L3           0 ("GONZALEZ VILLASENOR L I"/AU AND "GONZALEZ VILLASENOR LUCIA
               IRENE"/AU) AND (INCLUSION WITH BODIES)

=> E1 and (inclusion with bodies)
             5 "GONZALEZ VILLASENOR L I"/AU
         93495 INCLUSION
         58928 INCLUSIONS
        130960 INCLUSION
                 (INCLUSION OR INCLUSIONS)
         98599 BODIES
          5004 INCLUSION WITH BODIES
                 (INCLUSION(1W)BODIES)
L4           0 "GONZALEZ VILLASENOR L I"/AU AND (INCLUSION WITH BODIES)

=> E1 and (protein with purification)
             5 "GONZALEZ VILLASENOR L I"/AU
       1554309 PROTEIN
       1066821 PROTEINS
       1799219 PROTEIN
                 (PROTEIN OR PROTEINS)
        295650 PURIFICATION
           880 PURIFICATIONS
        296238 PURIFICATION
                 (PURIFICATION OR PURIFICATIONS)
        250909 PURIFN
           232 PURIFNS
        251012 PURIFN
                 (PURIFN OR PURIFNS)
        426444 PURIFICATION
                 (PURIFICATION OR PURIFN)
          8226 PROTEIN WITH PURIFICATION
                 (PROTEIN(1W)PURIFICATION)
L5           0 "GONZALEZ VILLASENOR L I"/AU AND (PROTEIN WITH PURIFICATION)

=> E1
L6           5 "GONZALEZ VILLASENOR L I"/AU

=> d ti

L6   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   A solid phase plate assay for HIV-1 genotyping


=> d ti 1-5

L6   ANSWER 1 OF 5  CAPLUS  COPYRIGHT 2003 ACS on STN
TI   A solid phase plate assay for HIV-1 genotyping
```

L6 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI A duplex PCR assay for detection and genotyping of Herpes simplex virus in cerebrospinal fluid

L6 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI Production of a biologically active recombinant teleostean growth hormone in E. coli cells

L6 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI Gene transfer, expression and inheritance of rainbow trout and human growth hormone genes in carp and loach

L6 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2003 ACS on STN
TI Evolutionary implications of two rainbow trout growth hormone genes

=> e2
L7 10 "GONZALEZ VILLASENOR LUCIA IRENE"/AU

=> d 1-10

L7 ANSWER 1 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:696439 CAPLUS
DN 139:212998
TI Methods for the solubilization and recovery of recombinant proteins
IN **Gonzalez-Villasenor, Lucia Irene**
PA USA
SO U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|
| PI US 2003166062 | A1 | 20030904 | US 2002-80919 | 20020222 |
| PRAI US 2001-270839P | P | 20010223 | | |

L7 ANSWER 2 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:462109 CAPLUS
DN 131:241724
TI Antibodies for growth hormone and prolactin using multiple antigen peptide immunogens
AU **Gonzalez-Villasenor, Lucia Irene**; Chen, Thomas T.
CS BBI-Biotech Research Laboratories, Gaithersburg, MD, 20877, USA
SO Marine Biotechnology (1999), 1(3), 211-220
CODEN: MABIFW; ISSN: 1436-2228
PB Springer-Verlag New York Inc.
DT Journal
LA English
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1998:500502 CAPLUS
DN 129:255554
TI Screening for specific recombinant clones
AU **Gonzalez-Villasenor, Lucia Irene**; Manak, Mark M.
CS BBI-Biotech Research Laboratories, Inc., Gaithersburg, MD, USA

SO Recombinant DNA Principles and Methodologies (1998), 579-638. Editor(s): Greene, James J.; Rao, Venigalla B. Publisher: Dekker, New York, N. Y. CODEN: 66MCAE
DT Conference; General Review
LA English
RE.CNT 190 THERE ARE 190 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1993:445689 CAPLUS
DN 119:45689
TI Effect of growth hormone on the growth rate of the gilthead seabream (Sparus aurata), and use of different constructs for the production of transgenic fish
AU Cavari, Benzion; Funkenstein, Bruria; Chen, Thomas T.; **Gonzalez-Villasenor, Lucia Irene**; Schartl, Manfred
CS Israel Oceanographic and Limnological Research, Haifa, Israel
SO Aquaculture (1993), 111(1-4), 189-97
CODEN: AQCLAL; ISSN: 0044-8486
DT Journal
LA English

L7 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1990:192958 CAPLUS
DN 112:192958
TI Mitochondrial DNA restriction site polymorphisms in the teleost Fundulus heteroclitus support secondary intergradation
AU **Gonzalez-Villasenor, Lucia Irene**; Powers, Dennis A.
CS Dep. Biol., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SO Evolution (Lawrence, KS, United States) (1990), 44(1), 27-37
CODEN: EVOLAO; ISSN: 0014-3820
DT Journal
LA English

L7 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1990:173590 CAPLUS
DN 112:173590
TI Gene transfer, expression and inheritance of pRSV-rainbow trout-GH cDNA in the common carp, Cyprinus carpio (Linnaeus)
AU Zhang, Peijung; Hayat, Mohammad; Joyce, Christopher; **Gonzalez-Villasenor, Lucia Irene**; Lin, C. M.; Dunham, Rex A.; Chen, Thomas T.; Powers, Dennis A.
CS Hopkins Mar. Stn., Stanford Univ., Pacific Grove, CA, USA
SO Molecular Reproduction and Development (1990), 25(1), 3-13
CODEN: MREDEE; ISSN: 1040-452X
DT Journal
LA English

L7 ANSWER 7 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1988:505725 CAPLUS
DN 109:105725
TI Molecular cloning and sequencing of coho salmon growth hormone cDNA
AU **Gonzalez-Villasenor, Lucia Irene**; Zhang, Peijun; Chen, Thomas T.; Powers, Dennis A.
CS Dep. Biol., Johns Hopkins Univ., Baltimore, MD, 21219, USA
SO Gene (1988), 65(2), 239-46
CODEN: GENED6; ISSN: 0378-1119
DT Journal
LA English

L7 ANSWER 8 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1986:620055 CAPLUS
DN 105:220055
TI Characterization of cloned mitochondrial DNA from the teleost Fundulus heteroclitus and its usefulness as an interspecies hybridization probe
AU **Gonzalez-Villasenor, Lucia Irene**; Burkhoff, Amanda M.; Corces, Victor; Powers, Dennis A.
CS McCollum-Pratt Inst., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SO Canadian Journal of Fisheries and Aquatic Sciences (1986), 43(10), 1866-72
CODEN: CJFSDX; ISSN: 0706-652X
DT Journal
LA English

L7 ANSWER 9 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1986:567787 CAPLUS
DN 105:167787
TI A multilocus system for studying tissue and subcellular specialization. The pH and temperature dependence of the two major NADP-dependent isocitrate dehydrogenase isoenzymes of the fish Fundulus heteroclitus
AU **Gonzalez-Villasenor, Lucia Irene**; Powers, Dennis A.
CS McCollum-Pratt Inst., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SO Journal of Biological Chemistry (1986), 261(25), 11471-7
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

L7 ANSWER 10 OF 10 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1985:518596 CAPLUS
DN 103:118596
TI A multilocus system for studying tissue and subcellular specialization. The three NADP-dependent isocitrate dehydrogenase isozymes of the fish Fundulus heteroclitus
AU **Gonzalez-Villasenor, Lucia Irene**; Powers, Dennis A.
CS McCollum-Pratt Inst., Johns Hopkins Univ., Baltimore, MD, 21218, USA
SO Journal of Biological Chemistry (1985), 260(16), 9106-13
CODEN: JBCHA3; ISSN: 0021-9258
DT Journal
LA English

=> FIL STNGUIDE

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 49.16 | 49.37 |

FILE 'STNGUIDE' ENTERED AT 17:14:37 ON 07 OCT 2003
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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Oct 3, 2003 (20031003/UP).

=> log y

| COST IN U.S. DOLLARS | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 0.12 | 49.49 |

16/10/200316:24protein purification.trn

STN INTERNATIONAL LOGOFF AT 17:15:41 ON 07 OCT 2003

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PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

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| | | |
|---|---|---|
| NEWS 1 | | Web Page URLs for STN Seminar Schedule - N. America |
| NEWS 2 | | "Ask CAS" for self-help around the clock |
| NEWS 3 | SEP 09 | CA/CAplus records now contain indexing from 1907 to the present |
| NEWS 4 | Jul 15 | Data from 1960-1976 added to RDISCLOSURE |
| NEWS 5 | Jul 21 | Identification of STN records implemented |
| NEWS 6 | Jul 21 | Polymer class term count added to REGISTRY |
| NEWS 7 | Jul 22 | INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available |
| NEWS 8 | AUG 05 | New pricing for EUROPATFULL and PCTFULL effective August 1, 2003 |
| NEWS 9 | AUG 13 | Field Availability (/FA) field enhanced in BEILSTEIN |
| NEWS 10 | AUG 15 | PATDPAFULL: one FREE connect hour, per account, in September 2003 |
| NEWS 11 | AUG 15 | PCTGEN: one FREE connect hour, per account, in September 2003 |
| NEWS 12 | AUG 15 | RDISCLOSURE: one FREE connect hour, per account, in September 2003 |
| NEWS 13 | AUG 15 | TEMA: one FREE connect hour, per account, in September 2003 |
| NEWS 14 | AUG 18 | Data available for download as a PDF in RDISCLOSURE |
| NEWS 15 | AUG 18 | Simultaneous left and right truncation added to PASCAL |
| NEWS 16 | AUG 18 | FROSTI and KOSMET enhanced with Simultaneous Left and Righ Truncation |
| NEWS 17 | AUG 18 | Simultaneous left and right truncation added to ANABSTR |
| NEWS 18 | SEP 22 | DIPPR file reloaded |
| NEWS 19 | SEP 25 | INPADOC: Legal Status data to be reloaded |
| NEWS 20 | SEP 29 | DISSABS now available on STN |

| | |
|---|---|
| NEWS EXPRESS | OCTOBER 01 CURRENT WINDOWS VERSION IS V6.01a, CURRENT MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP), AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003 |
| NEWS HOURS | STN Operating Hours Plus Help Desk Availability |
| NEWS INTER | General Internet Information |
| NEWS LOGIN | Welcome Banner and News Items |
| NEWS PHONE | Direct Dial and Telecommunication Network Access to STN |
| NEWS WWW | CAS World Wide Web Site (general information) |

Enter NEWS followed by the item number or name to see news on that specific topic.

16/10/200316:24protein purification.trn

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* * * * * * * * * * * * * * STN Columbus * * * * * * * * * * * * * * * *

FILE 'HOME' ENTERED AT 09:31:49 ON 08 OCT 2003

=> filr caplus
THIS COMMAND NOT AVAILABLE IN THE CURRENT FILE
Some commands only work in certain files. For example, the EXPAND command can only be used to look at the index in a file which has an index. Enter "HELP COMMANDS" at an arrow prompt (=>) for a list of commands which can be used in this file.

=> file caplus
COST IN U.S. DOLLARS

| | SINCE FILE ENTRY | TOTAL SESSION |
|---|---|---|
| FULL ESTIMATED COST | 0.42 | 0.42 |

FILE 'CAPLUS' ENTERED AT 09:32:45 ON 08 OCT 2003
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FILE COVERS 1907 - 8 Oct 2003 VOL 139 ISS 15
FILE LAST UPDATED: 7 Oct 2003 (20031007/ED)

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> solubilization with solution
```
         30365 SOLUBILIZATION
            58 SOLUBILIZATIONS
         30380 SOLUBILIZATION
                 (SOLUBILIZATION OR SOLUBILIZATIONS)
        223220 SOLUTION
        259454 SOLUTIONS
        469427 SOLUTION
                 (SOLUTION OR SOLUTIONS)
       2013933 SOLN
        955352 SOLNS
       2554375 SOLN
                 (SOLN OR SOLNS)
```

16/10/200316:24protein purification.trn

```
       2650615 SOLUTION
                 (SOLUTION OR SOLN)
L1         115 SOLUBILIZATION WITH SOLUTION
                 (SOLUBILIZATION(1W)SOLUTION)

=> inclusion with bodies
         93512 INCLUSION
         58934 INCLUSIONS
        130978 INCLUSION
                 (INCLUSION OR INCLUSIONS)
         98606 BODIES
L2        5006 INCLUSION WITH BODIES
                 (INCLUSION(1W)BODIES)

=> sodium and hydroxide
        903357 SODIUM
            34 SODIUMS
        903367 SODIUM
                 (SODIUM OR SODIUMS)
        235043 HYDROXIDE
         40898 HYDROXIDES
        255420 HYDROXIDE
                 (HYDROXIDE OR HYDROXIDES)
L3       89309 SODIUM AND HYDROXIDE

=> l1 and l2 and l3
L4           1 L1 AND L2 AND L3

=> d 1

L4   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS on STN
AN   2003:696439  CAPLUS
DN   139:212998
TI   Methods for the solubilization and recovery of recombinant proteins
IN   Gonzalez-Villasenor, Lucia Irene
PA   USA
SO   U.S. Pat. Appl. Publ., 21 pp.
     CODEN: USXXCO
DT   Patent
LA   English
FAN.CNT 1
     PATENT NO.        KIND  DATE           APPLICATION NO.  DATE
     ---------------   ----  --------       ---------------  --------
PI   US 2003166062      A1   20030904       US 2002-80919    20020222
PRAI US 2001-270839P    P    20010223


=>
=> solubilization with buffer
         30365 SOLUBILIZATION
            58 SOLUBILIZATIONS
         30380 SOLUBILIZATION
                 (SOLUBILIZATION OR SOLUBILIZATIONS)
        197793 BUFFER
         26527 BUFFERS
        212317 BUFFER
                 (BUFFER OR BUFFERS)
L5          41 SOLUBILIZATION WITH BUFFER
                 (SOLUBILIZATION(1W)BUFFER)
```

16/10/200316:24protein purification.trn

```
=> (sodium with hydroxide) or (NaOH)
        903357 SODIUM
            34 SODIUMS
        903367 SODIUM
                 (SODIUM OR SODIUMS)
        235043 HYDROXIDE
         40898 HYDROXIDES
        255420 HYDROXIDE
                 (HYDROXIDE OR HYDROXIDES)
         69166 SODIUM WITH HYDROXIDE
                 (SODIUM(1W)HYDROXIDE)
        335417 NAOH
             3 NAOHS
        335418 NAOH
                 (NAOH OR NAOHS)
L6      364015 (SODIUM WITH HYDROXIDE) OR (NAOH)

=> l4 and l5
L7           0 L4 AND L5

=> l5 and l6
L8           1 L5 AND L6

=> d 1

L8   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS on STN
AN   2002:841319  CAPLUS
DN   138:52213
TI   Solubilization of trichloroacetic acid (TCA) precipitated microbial
     proteins via NaOH for two-dimensional electrophoresis
AU   Nandakumar, M. P.; Shen, Jie; Raman, Babu; Marten, Mark R.
CS   Department of Chemical & Biochemical Engineering, University of Maryland,
     Baltimore, MD, 21250, USA
SO   Journal of Proteome Research (2003), 2(1), 89-93
     CODEN: JPROBS; ISSN: 1535-3893
PB   American Chemical Society
DT   Journal
LA   English
RE.CNT  22    THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> d bib 1

L8   ANSWER 1 OF 1  CAPLUS  COPYRIGHT 2003 ACS on STN
AN   2002:841319  CAPLUS
DN   138:52213
TI   Solubilization of trichloroacetic acid (TCA) precipitated microbial
     proteins via NaOH for two-dimensional electrophoresis
AU   Nandakumar, M. P.; Shen, Jie; Raman, Babu; Marten, Mark R.
CS   Department of Chemical & Biochemical Engineering, University of Maryland,
     Baltimore, MD, 21250, USA
SO   Journal of Proteome Research (2003), 2(1), 89-93
     CODEN: JPROBS; ISSN: 1535-3893
PB   American Chemical Society
DT   Journal
LA   English
RE.CNT  22    THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
```

ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ab 1

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AB In prepg. intracellular microbial samples for one- or two-dimensional electrophoresis, trichloroacetic acid (TCA) pptn. is frequently used to remove interfering compds. Solubilization of TCA ppt. typically requires the addn. of a no. of chaotropes or detergents, in a multistep process, that requires hours to carry out. In this study, a simple, rapid, one-step method to solubilize TCA pptd. proteins is presented. Pptd. proteins are pretreated with 0.2 M **NaOH** for less than 5 min, followed by addn. of std. sample **solubilization buffer** (SSSB). When compared to solubilization with SSSB alone, **NaOH** pretreatment of TCA-pptd. intracellular protein from Aspergillus oryzae and Escherichia coli shows an approx. 5-fold increase in sol. protein. In addn., two-dimensional gel electrophoresis on resolubilized proteins shows an equiv. no. of proteins in samples with and without **NaOH** pretreatment.

=> d all 1

L8 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:841319 CAPLUS
DN 138:52213
TI Solubilization of trichloroacetic acid (TCA) precipitated microbial proteins via **NaOH** for two-dimensional electrophoresis
AU Nandakumar, M. P.; Shen, Jie; Raman, Babu; Marten, Mark R.
CS Department of Chemical & Biochemical Engineering, University of Maryland, Baltimore, MD, 21250, USA
SO Journal of Proteome Research (2003), 2(1), 89-93
CODEN: JPROBS; ISSN: 1535-3893
PB American Chemical Society
DT Journal
LA English
CC 9-7 (Biochemical Methods)
Section cross-reference(s): 10, 16
AB In prepg. intracellular microbial samples for one- or two-dimensional electrophoresis, trichloroacetic acid (TCA) pptn. is frequently used to remove interfering compds. Solubilization of TCA ppt. typically requires the addn. of a no. of chaotropes or detergents, in a multistep process, that requires hours to carry out. In this study, a simple, rapid, one-step method to solubilize TCA pptd. proteins is presented. Pptd. proteins are pretreated with 0.2 M **NaOH** for less than 5 min, followed by addn. of std. sample **solubilization buffer** (SSSB). When compared to solubilization with SSSB alone, **NaOH** pretreatment of TCA-pptd. intracellular protein from Aspergillus oryzae and Escherichia coli shows an approx. 5-fold increase in sol. protein. In addn., two-dimensional gel electrophoresis on resolubilized proteins shows an equiv. no. of proteins in samples with and without **NaOH** pretreatment.
ST trichloroacetate pptd microbial protein **NaOH** electrophoresis
IT Aspergillus oryzae
Escherichia coli
(solubilization of trichloroacetic acid (TCA) pptd. microbial proteins via **NaOH** for two-dimensional electrophoresis)
IT Proteins

16/10/200316:24protein purification.trn

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)
(solubilization of trichloroacetic acid (TCA) pptd. microbial proteins via **NaOH** for two-dimensional electrophoresis)
IT Electrophoresis
Gel electrophoresis
(two-dimensional; solubilization of trichloroacetic acid (TCA) pptd. microbial proteins via **NaOH** for two-dimensional electrophoresis)
IT 76-03-9, Trichloroacetic acid, uses 1310-73-2, **Sodium hydroxide** (**NaOH**), uses
RL: NUU (Other use, unclassified); USES (Uses)
(solubilization of trichloroacetic acid (TCA) pptd. microbial proteins via **NaOH** for two-dimensional electrophoresis)
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE
(1) Anon; Compugen Z3 Manual 2002
(2) Anon; Pharmacia 2-D Electrophoresis Using Immobilized Ph Gradients-Principles & Methods 2002
(3) Delisa, M; Biotechnol Bioeng 1999, V65, P54 CAPLUS
(4) Gorg, A; Electrophoresis 1997, V18, P328 CAPLUS
(5) Guy, G; Electrophoresis 1994, V15, P417 CAPLUS
(6) Hames, B; Gel Electrophoresis of Proteins A Practical Approach 1981, P1
(7) Harder, A; Electrophoresis 1999, V20, P826 CAPLUS
(8) Herbert, B; Electrophoresis 1998, V19, P845 CAPLUS
(9) Herbert, B; Electrophoresis 1999, V20, P660 CAPLUS
(10) Jacobs, D; Proteomics 2001, V1, P1345 CAPLUS
(11) James, R; Electrophoresis 2000, V1, P3724
(12) Leimgruber, R; Proteomics 2002, V2, P135 CAPLUS
(13) Li, Z; Biotech Lett 2002, V24, P1 CAPLUS
(14) Molloy, M; Electrophoresis 1998, V19, P837 CAPLUS
(15) Nandakumar, M; Electrophoresis 2002, V23, P2216 CAPLUS
(16) Peterson, G; Methods Enzymol 1983, V91, P51
(17) Pridmore, A; Lett in Applied Microbiology 1999, V28, P245 CAPLUS
(18) Rabilloud, T; Electrophoresis 1996, V17, P813 CAPLUS
(19) Rabilloud, T; Electrophoresis 1997, V18, P837
(20) Raman, B; Electrophoresis 2002, V23, P2194 CAPLUS
(21) Riesenberg, D; J Biotechnol 1991, V20, P17 CAPLUS
(22) Shevchenko, A; Anal Chem 1996, V68, P850 CAPLUS

=> file biosis

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FILE 'BIOSIS' ENTERED AT 10:04:14 ON 08 OCT 2003


FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 1 October 2003 (20031001/ED)

16/10/200316:24protein purification.trn

```
=> l5 and l6
         12589 SOLUBILIZATION
            22 SOLUBILIZATIONS
         12601 SOLUBILIZATION
                 (SOLUBILIZATION OR SOLUBILIZATIONS)
         60195 BUFFER
          8873 BUFFERS
         66052 BUFFER
                 (BUFFER OR BUFFERS)
            30 SOLUBILIZATION WITH BUFFER
                 (SOLUBILIZATION(1W)BUFFER)
        334605 SODIUM
             4 SODIUMS
        334606 SODIUM
                 (SODIUM OR SODIUMS)
         14838 HYDROXIDE
           854 HYDROXIDES
         15485 HYDROXIDE
                 (HYDROXIDE OR HYDROXIDES)
          4508 SODIUM WITH HYDROXIDE
                 (SODIUM(1W)HYDROXIDE)
          6924 NAOH
L9           1 L5 AND L6

=> d ti

L9   ANSWER 1 OF 1  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
TI   Solubilization of trichloroacetic acid (TCA) precipitated microbial
     proteins via NaOH for two-dimensional electrophoresis.


=> FIL MEDLINE
COST IN U.S. DOLLARS                                SINCE FILE      TOTAL
                                                      ENTRY    SESSION
FULL ESTIMATED COST                                    5.88      54.08

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)          SINCE FILE      TOTAL
                                                      ENTRY    SESSION
CA SUBSCRIBER PRICE                                    0.00      -1.30

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 FILE LAST UPDATED: 4 OCT 2003 (20031004/UP).  FILE COVERS 1958 TO DATE.

 On April 13, 2003, MEDLINE was reloaded.  See HELP RLOAD for details.

 MEDLINE thesauri in the /CN, /CT, and /MN fields incorporate the
 MeSH 2003 vocabulary.  See http://www.nlm.nih.gov/mesh/changes2003.html
 for a description on changes.

 This file contains CAS Registry Numbers for easy and accurate
 substance identification.

=> l5 and l6
          8101 SOLUBILIZATION
            12 SOLUBILIZATIONS
          8109 SOLUBILIZATION
                 (SOLUBILIZATION OR SOLUBILIZATIONS)
```

```
          44163 BUFFER
          19151 BUFFERS
          57458 BUFFER
                  (BUFFER OR BUFFERS)
             25 SOLUBILIZATION WITH BUFFER
                  (SOLUBILIZATION(1W)BUFFER)
         282012 SODIUM
              5 SODIUMS
         282012 SODIUM
                  (SODIUM OR SODIUMS)
          12780 HYDROXIDE
           3725 HYDROXIDES
          15459 HYDROXIDE
                  (HYDROXIDE OR HYDROXIDES)
           3576 SODIUM WITH HYDROXIDE
                  (SODIUM(1W)HYDROXIDE)
           3072 NAOH
L10           1 L5 AND L6

=> d ti

L10  ANSWER 1 OF 1     MEDLINE on STN
TI   Solubilization of trichloroacetic acid (TCA) precipitated microbial
     proteins via naOH for two-dimensional electrophoresis.


=> buffer
          44163 BUFFER
          19151 BUFFERS
L11       57458 BUFFER
                  (BUFFER OR BUFFERS)

=> inclusion with bodies
          49203 INCLUSION
          10672 INCLUSIONS
          56078 INCLUSION
                  (INCLUSION OR INCLUSIONS)
          93843 BODIES
L12       15538 INCLUSION WITH BODIES
                  (INCLUSION(1W)BODIES)

=> (sodium (w) hydroxide) or NaOH
         282012 SODIUM
              5 SODIUMS
         282012 SODIUM
                  (SODIUM OR SODIUMS)
          12780 HYDROXIDE
           3725 HYDROXIDES
          15459 HYDROXIDE
                  (HYDROXIDE OR HYDROXIDES)
           3573 SODIUM (W) HYDROXIDE
           3072 NAOH
L13        6065 (SODIUM (W) HYDROXIDE) OR NAOH

=> l11 and l12 and l13
L14           1 L11 AND L12 AND L13

=> d ti
```

16/10/200316:24protein purification.trn

L14 ANSWER 1 OF 1 MEDLINE on STN
TI Expression, purification and initial characterization of the recombinant storage protein precursor of Theobroma cacao.

=> d ab 1

L14 ANSWER 1 OF 1 MEDLINE on STN
AB The gene encoding the 67-kDa cocoa storage protein precursor has been cloned from Theobroma cacao and expressed in Escherichia coli using the pET expression system. The recombinant storage protein has been renatured from **inclusion bodies** at 30 degrees C using 20 mM glycine-**NaOH buffer**, pH 10.0, containing 1 mM oxidized glutathione and 0.1% Brij. The renatured protein was purified and demonstrated to adopt a stable native conformation by optical spectroscopy. Secondary structure analysis from circular dichroism indicated the protein to be 23% alpha-helix and 38% beta-sheet, in close agreement with values obtained using a secondary structure prediction program.

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NEWS 3 SEP 09 CA/CAplus records now contain indexing from 1907 to the present
NEWS 4 Jul 15 Data from 1960-1976 added to RDISCLOSURE
NEWS 5 Jul 21 Identification of STN records implemented
NEWS 6 Jul 21 Polymer class term count added to REGISTRY
NEWS 7 Jul 22 INPADOC: Basic index (/BI) enhanced; Simultaneous Left and Right Truncation available
NEWS 8 AUG 05 New pricing for EUROPATFULL and PCTFULL effective August 1, 2003
NEWS 9 AUG 13 Field Availability (/FA) field enhanced in BEILSTEIN
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NEWS 11 AUG 15 PCTGEN: one FREE connect hour, per account, in September 2003
NEWS 12 AUG 15 RDISCLOSURE: one FREE connect hour, per account, in September 2003
NEWS 13 AUG 15 TEMA: one FREE connect hour, per account, in

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                    September 2003
 NEWS 14   AUG 18  Data available for download as a PDF in RDISCLOSURE
 NEWS 15   AUG 18  Simultaneous left and right truncation added to PASCAL
 NEWS 16   AUG 18  FROSTI and KOSMET enhanced with Simultaneous Left and Righ
                   Truncation
 NEWS 17   AUG 18  Simultaneous left and right truncation added to ANABSTR
 NEWS 18   SEP 22  DIPPR file reloaded
 NEWS 19   SEP 25  INPADOC: Legal Status data to be reloaded
 NEWS 20   SEP 29  DISSABS now available on STN

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               AND CURRENT DISCOVER FILE IS DATED 23 SEPTEMBER 2003
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FILE 'HOME' ENTERED AT 11:22:08 ON 08 OCT 2003

=> file patents
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=> solubilization and buffer
  21 FILES SEARCHED...
L1       17957 SOLUBILIZATION AND BUFFER

=> inclusion with bodies
   8 FILES SEARCHED...
  21 FILES SEARCHED...
L2       10326 INCLUSION WITH BODIES

=> solubilization with buffer
   9 FILES SEARCHED...
  21 FILES SEARCHED...
L3         609 SOLUBILIZATION WITH BUFFER

=> (sodium with hydroxide) and (NaOH)
   8 FILES SEARCHED...
  16 FILES SEARCHED...
  21 FILES SEARCHED...
L4       99871 (SODIUM WITH HYDROXIDE) AND (NAOH)

=> l2 and l3 and l4
  16 FILES SEARCHED...
  26 FILES SEARCHED...
L5           3 L2 AND L3 AND L4

=> d ab

L5   ANSWER 1 OF 3  USPATFULL on STN
AB     This invention entails a method for solubilizing and recovering, in
       bioactive and isolated form with retained native state configuration, a
       target peptide from a host organism in which the heterologous
       polypeptide is present in insoluble form. Broadly this method comprises
       (i) disrupting the host cell to produce a lysate (ii) recovering lysate
       precipitate containing the polypeptide (iii) resuspending the lysate
       precipitate in a denaturant-free, non-buffered solubilization solution

to produce a solubilization preparation that comprises both **sodium hydroxide** between about 8 and about 10 mM and the target peptide between about 1 and about 4 mg peptide per ml solubilization solution, wherein the resultant solubilization preparation has a pH of between about 9 and about 11.2; (iv) recovering supernatant from the solubilization preparation containing non-denatured target peptide. Optionally, stabilizing compounds and detergents are employed. The invention further comprises isolated insoluble proteins in bioactive form and native state configuration.

=> d ab 2

L5 ANSWER 2 OF 3 USPATFULL on STN
AB Disclosed are novel proteins, referred to as tumor necrosis factor binding proteins, that modulate the activity of tumor necrosis factor. Also disclosed are processes for obtaining the tumor necrosis binding proteins by recombinant genetic engineering techniques.

=> d bib 2-3

L5 ANSWER 2 OF 3 USPATFULL on STN
AN 2003:78519 USPATFULL
TI Truncated soluble tumor necrosis factor type-I and type-II receptors
IN Fisher, Eric F., New Braunfels, TX, UNITED STATES
Edwards, Carl K., III, Superior, CO, UNITED STATES
Kieft, Gary L., Boulder, CO, UNITED STATES
PA Amgen Inc. (U.S. corporation)
PI US 2003054439 A1 20030320
AI US 2001-882735 A1 20010615 (9)
RLI Continuation of Ser. No. US 1999-214613, filed on 8 Jan 1999, ABANDONED A 371 of International Ser. No. WO 1997-US12244, filed on 9 Jul 1997, UNKNOWN
PRAI US 1997-39792P 19970304 (60)
US 1997-39314P 19970207 (60)
US 1997-37737P 19970123 (60)
US 1996-32534P 19961206 (60)
US 1996-21443P 19960709 (60)
DT Utility
FS APPLICATION
LREP AMGEN INCORPORATED, MAIL STOP 27-4-A, ONE AMGEN CENTER DRIVE, THOUSAND OAKS, CA, 91320-1799
CLMN Number of Claims: 31
ECL Exemplary Claim: 1
DRWN 13 Drawing Page(s)
LN.CNT 4745
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 3 OF 3 USPATFULL on STN
AN 2002:258433 USPATFULL
TI Anti-CD3 immunotoxins and therapeutic uses therefor
IN Digan, Mary Ellen, Morristown, NJ, UNITED STATES
Lake, Philip, Morris Plains, NJ, UNITED STATES
Wright, Richard Michael, Annandale, NJ, UNITED STATES
PI US 2002142000 A1 20021003
AI US 2000-480236 A1 20000110 (9)
DT Utility
FS APPLICATION

LREP THOMAS HOXIE, NOVARTIS CORPORATION, PATENT AND TRADEMARK DEPT, 564 MORRIS AVENUE, SUMMIT, NJ, 079011027
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 23 Drawing Page(s)
LN.CNT 2935
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> FIL STNGUIDE

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|---|---|---|
| FULL ESTIMATED COST | 94.93 | 95.14 |

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| FULL ESTIMATED COST | 1.50 | 96.64 |

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FILE 'BIOSIS' ENTERED AT 11:46:00 ON 08 OCT 2003
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=> solubilization with preparation
L6 107 SOLUBILIZATION WITH PREPARATION

=> inclusion with bodies
L7 25388 INCLUSION WITH BODIES

=> (sodium with hydroxide) or (NaOH)
L8 380040 (SODIUM WITH HYDROXIDE) OR (NAOH)

=> l6 and l7 and l8
L9 1 L6 AND L7 AND L8

=> d

L9 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:696439 CAPLUS

DN 139:212998
TI Methods for the solubilization and recovery of recombinant proteins
IN Gonzalez-Villasenor, Lucia Irene
PA USA
SO U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2003166062 | A1 | 20030904 | US 2002-80919 | 20020222 |
| PRAI | US 2001-270839P | P | 20010223 | | |

=> solubil?
L10 402441 SOLUBIL?

=> l7 and l8 and l9
L11 1 L7 AND L8 AND L9

=> d

L11 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:696439 CAPLUS
DN 139:212998
TI Methods for the solubilization and recovery of recombinant proteins
IN Gonzalez-Villasenor, Lucia Irene
PA USA
SO U.S. Pat. Appl. Publ., 21 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | US 2003166062 | A1 | 20030904 | US 2002-80919 | 20020222 |
| PRAI | US 2001-270839P | P | 20010223 | | |

=> l7 and l8 and l10
L12 18 L7 AND L8 AND L10

=> d ti 1-10

L12 ANSWER 1 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Methods for the **solubilization** and recovery of recombinant proteins

L12 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli

L12 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli

L12 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Method for purifying recombinant proteins expressed as insoluble

aggregates

L12 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Mechanical properties of lignocellulosics/bioplastic composites

L12 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Production of a biologically active novel goldfish growth hormone in Escherichia coli

L12 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Extraction of polypeptide **inclusion bodies** from expression hosts with a two-phase aqueous system with **solubilization** and renaturation of the polypeptide

L12 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Method for **solubilization** and naturation of somatotropins utilizing low urea concentration

L12 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Expression of plant genes in transfected mammalian cells: accumulation of recombinant preLHCIIb proteins within cytoplasmic **inclusion bodies**

L12 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
TI Characteristics of proteins of granulosis viral **inclusion bodies** of the cabbage butterfly Pieris brassicae L (Lepidoptera:Pieridae)

=> d ab bib 2-10

L12 ANSWER 2 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB A cDNA encoding Ailuropoda melanoleuca growth hormone (AmGH) was isolated from pituitary total RNA using RT-PCR and expressed in Escherichia coli. This is the first report of a GH nucleotide and amino acid (aa) sequence from giant panda. The open reading frame of AmGH (651 bp) encodes a precursor of 216 aa comprising a 26 aa signal peptide and a 190 aa mature protein with four cysteine residues similar to the typical primary structure of mammalian GH precursor. AmGH shares a high degree of identity (54-98.9%) with that of mammals, birds and amphibians, but a very low identity with bony fish GH (only 20-30%). The mature AmGH exhibits striking similarity to that of putative ancestral GH with a difference of only two residues, indicating a very slow basal rate of mol. evolution. The DNA fragment encoding mature AmGH was then subcloned into the pGEX-4T-1 expression vector and highly expressed in E. coli host BL21 with IPTG induction. The expressed proteins fused to GST were found to be sequestered into **inclusion bodies** and therefore the **NaOH** method was employed to **solubilize** the **inclusion bodies**; the proteins were further purified by Glutathione Sepharose 4B affinity chromatog. The prodn. and purifn. of GST-AmGH reported here provide a basis for further studies on the biol. activity of AmGH.
AN 2003:522117 CAPLUS
DN 139:207922
TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli
AU Liao, Ming Juan; Zhu, Mu Yuan; Zheng, Xu; Zhang, Zhi He; Zhang, An Ju
CS State Key Laboratory of Plant Physiology and Biochemistry, College of Life Sciences, Zhejiang University, Hangzhou, 310012, Peop. Rep. China

SO Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular Biology (2003), 135B(1), 109-116
CODEN: CBPBB8; ISSN: 1096-4959
PB Elsevier Science Inc.
DT Journal
LA English
RE.CNT 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 3 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB A cDNA encoding Ailuropoda melanoleuca growth hormone (AmGH) was isolated from pituitary total RNA using RT-PCR and expressed in Escherichia coli. This is the first report of a GH nucleotide and amino acid (aa) sequence from giant panda. The open reading frame of AmGH (651 bp) encodes a precursor of 216 aa comprising a 26 aa signal peptide and a 190 aa mature protein with four cysteine residues similar to the typical primary structure of mammalian GH precursor. AmGH shares a high degree of identity (54-98.9%) with that of mammals, birds and amphibians, but a very low identity with bony fish GH (only 20-30%). The mature AmGH exhibits striking similarity to that of putative ancestral GH with a difference of only two residues, indicating a very slow basal rate of mol. evolution. The DNA fragment encoding mature AmGH was then subcloned into the pGEX-4T-1 expression vector and highly expressed in E. coli host BL21 with IPTG induction. The expressed proteins fused to GST were found to be sequestered into **inclusion bodies** and therefore the **NaOH** method was employed to **solubilize** the **inclusion bodies**; the proteins were further purified by Glutathione Sepharose 4B affinity chromatog. The prodn. and purifn. of GST-AmGH reported here provide a basis for further studies on the biol. activity of AmGH.
AN 2003:407259 CAPLUS
TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli
AU Liao, Ming Juan; Zhu, Mu Yuan; Zheng, Xu; Zhang, Zhi He; Zhang, An Ju
CS College of Life Sciences, State Key Laboratory of Plant Physiology and Biochemistry, Zhejiang University, PRHangzhou, 310012, Peop. Rep. China
SO Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular Biology (2003), B135(1), 109-116
CODEN: CBPBB8; ISSN: 1096-4959
PB Elsevier Science Inc.
DT Journal
LA English

L12 ANSWER 4 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB The invention relates to a method for **solubilizing** and purifying recombinant proteins, which are expressed in bacterial host cells and deposited as insol. aggregates (**inclusion bodies**). The purifn. is based on the conversion of the **inclusion bodies** into sol. forms while using org. denaturation reagents and on the use of chromatog. methods. To this end, inorg., alk. mobile solvents that contain salt are selected, which, after a purifn., make it possible to provide the recombinant proteins after neutralization in a physiol. acceptable form, which can be directly employed for medical use. The method is particularly suited for purifying allergens and allergen fragments.
AN 2002:185154 CAPLUS
DN 136:252566
TI Method for purifying recombinant proteins expressed as insoluble aggregates

16/10/200316:24protein purification.trn

IN Suck, Roland; Cromwell, Oliver; Fiebig, Helmut
PA Merck Patent G.m.b.H., Germany
SO PCT Int. Appl., 20 pp.
CODEN: PIXXD2
DT Patent
LA German
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 2002020559 | A1 | 20020314 | WO 2001-EP9552 | 20010818 |
| | W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG | | | | |
| | DE 10044360 | A1 | 20020321 | DE 2000-10044360 | 20000908 |
| | AU 2001087695 | A5 | 20020322 | AU 2001-87695 | 20010818 |
| | EP 1315740 | A1 | 20030604 | EP 2001-967286 | 20010818 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR | | | | |
| | US 2003170815 | A1 | 20030911 | US 2003-363788 | 20030307 |
| PRAI | DE 2000-10044360 | A | 20000908 | | |
| | WO 2001-EP9552 | W | 20010818 | | |

RE.CNT 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 5 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB The mech. properties of composites made of lignocellulosic fibers and bioplastics were investigated. Several lignocellulosics, e.g. sisal, sugarcane bagasse, wood flour (Pinus elliottii), cellulose pulp, rice husks, vegetal sponge (Luffa cylindrica), and lignin were tested. Poly-D-(-3-hydroxybutyrate) (I) is a bioplastic, a thermoplastic polyester, produced by microorganisms, so-called polyhydroxyalkanoates (PHAs), which constitute a class of natural polymers with phys. characteristics close to those of synthetic polymers, with the addnl. property of being completely biodegradable to CO2 and water through natural microbiol. mineralization, although it is water-resistant. Such polyesters are synthesized by bacteria from saccharides or other C sources and stored as intracellular **inclusion bodies**. Among these polymers, the best known PHA is I. The prepn. of lignocellulosics/I composites was done by mixing the components, and they were molded into specimens by injection molding techniques according to ASTM std. A load of lignocellulosic fibers in ratio of 15 wt.% was used. Dimensional stability, d., behavior toward some chem. reagents (**soly**. %) and tests of mech. properties, e.g. elongation at break, tensile and flexural strength, and tensile and flexural modulus, of the composites with different lignocelullosic fibers were evaluated. The results indicate that dimensional stability (immersion in water and oven drying at 100.degree., both for 24 h), d. (.apprxeq. 1.20 g/cm3), and mech. properties of composites were similar, as compared to pure I. Bagasse/I composites showed a decrease in the mech. properties, as compared to pure I and the other composites. The composites showed good resistance to attack by chem. reagents (**NaOH**, HCl, NaCl, and CH3COOH immersed sep. in aq. soln. (1.0 mol/L) of the reagents for 24 h at 25.degree. using a composite-liquor ratio 1:100), with the exception of bagasse and rice

husks/composites, which had low resistance to **NaOH**. The results showed that these lignocellulosic fibers could be used as excellent reinforcing materials for low cost composites and are able to satisfy economics, as well as ecol. interests.

AN 2001:880593 CAPLUS
DN 136:327237
TI Mechanical properties of lignocellulosics/bioplastic composites
AU Caraschi, Jose Claudio; Leao, Alcides Lopes
CS Dept. of Environmental Sciences - College of Agricultural Sciences, UNESP, Botucatu, 18603-970, Brazil
SO Brazilian Symposium on the Chemistry of Lignins and Other Wood Components, Proceedings, 6th, Guaratingueta, Brazil, Oct. 25-28, 1999 (2001), Meeting Date 1999, 113-118. Editor(s): Silva, Flavio Teixeira; Ferraz, Andre; Paiva, Teresa Cristina Brazil. Publisher: Faculdade de Engenharia Quimica de Lorena, Lorena, Brazil.
CODEN: 69CAX2
DT Conference
LA English
RE.CNT 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 6 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB Goldfish pituitary contains two types of growth hormones. One with five cysteine residues (type-I) similar to other Cyprinid GHs, and the other with four Cys residues (type-II) similar to those of other fish and tertapod species. Recombinant goldfish type II GH (gfGH-II) was produced in Escherichia coli using the pRSETB expression vector. The gfGH-II was produced fused to a leader sequence, which sequestered into **inclusion bodies** after expression. The **inclusion bodies** were **solubilized** using **sodium hydroxide** and the fusion protein purified by chelating affinity chromatog. Subsequently, gfGH-II was cleaved and analyzed by Western blotting, using a specific antiserum. For comparison the authors also produced recombinant common carp GH (cGH) which has 95% similarity to gfGH-II, and tested their growth promoting activity in goldfish. Both forms of GH significantly increased the growth rate of goldfish, although cGH was found to have a somewhat higher potency than gfGH-II.

AN 1998:725857 CAPLUS
DN 130:62667
TI Production of a biologically active novel goldfish growth hormone in Escherichia coli
AU Mahmoud, Soheil S.; Wang, Shuli; Moloney, Maurice M.; Habibi, Hamid R.
CS Department of Biological Sciences, University of Calgary, Calgary, AB, T2N 1N4, Can.
SO Comparative Biochemistry and Physiology, Part B: Biochemistry & Molecular Biology (1998), 120B(4), 657-663
CODEN: CBPBB8; ISSN: 0305-0491
PB Elsevier Science Inc.
DT Journal
LA English
RE.CNT 22 THERE ARE 22 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L12 ANSWER 7 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB A method is described for isolating an exogenous polypeptide in a non-native conformation from cells, such as an aq. fermn. broth. The **inclusion bodies** are incubated in a soln. of a chaotropic agent contg., preferably, a reducing agent and with

phase-forming species to form multiple aq. phases, with one of the phases being enriched in the polypeptide and depleted in the biomass solids and nucleic acids originating from the cells. The method results in two aq. phases, with the upper phase being enriched in the polypeptide. A large scale (1200 L) fermn. of Escherichia coli accumulating **inclusion bodies** of insulin-like growth factor 1 as a result of expression of the cloned gene was lysed with urea 174 kg and dithiothreitol 2.9 kg and brought to pH 10 with **NaOH**. The lysate was mixed with PEG-8000 250 and sodium sulfate 90 kg and the phases allowed to sep. The upper phase contained 88% of the total IGF-1 in the prepn. The upper phase was collected and neutralized to ppt. the IGF-1 and the pptd. material was resuspended in a folding medium of urea 10, NaCl 1 M, EtOH 19 vol%, glycine 20 mM, copper 0.5 .mu.M, DTT 1mM pH 10.5. Renaturation had reached a plateau at 3 h with a 50% yield of folded IGF-1.

AN 1995:610625 CAPLUS
DN 123:8040
TI Extraction of polypeptide **inclusion bodies** from expression hosts with a two-phase aqueous system with **solubilization** and renaturation of the polypeptide
IN Builder, Stuart; Hart, Roger; Lester, Philip; Ogez, John; Reifsnyder, David
PA Genentech, Inc., USA
SO PCT Int. Appl., 69 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | WO 9506059 | A1 | 19950302 | WO 1994-US9089 | 19940810 |
| | W: AU, CA, JP, US | | | | |
| | RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE | | | | |
| | US 5407810 | A | 19950418 | US 1993-110663 | 19930820 |
| | CA 2167910 | AA | 19950302 | CA 1994-2167910 | 19940810 |
| | AU 9475616 | A1 | 19950321 | AU 1994-75616 | 19940810 |
| | AU 673624 | B2 | 19961114 | | |
| | EP 714403 | A1 | 19960605 | EP 1994-925830 | 19940810 |
| | EP 714403 | B1 | 19980610 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LI, LU, MC, NL, PT, SE | | | | |
| | JP 09501931 | T2 | 19970225 | JP 1994-507623 | 19940810 |
| | AT 167193 | E | 19980615 | AT 1994-925830 | 19940810 |
| | ES 2119222 | T3 | 19981001 | ES 1994-925830 | 19940810 |
| | US 5723310 | A | 19980303 | US 1995-385187 | 19950207 |
| | US 5695958 | A | 19971209 | US 1995-446882 | 19950517 |
| PRAI | US 1993-110663 | | 19930820 | | |
| | WO 1994-US9089 | | 19940810 | | |
| | US 1994-318627 | | 19941011 | | |
| | US 1995-385187 | | 19950207 | | |

L12 ANSWER 8 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB Somatotropins are **solubilized** and renaturated from refractile bodies using a combination of low urea (1.8-2.2M) and aq. alk. soln. Bovine somatotropin from recombinant Escherichia coli refractile bodies was recovered in 48% yield using 2M urea and **NaOH** to adjust the pH to 12.0.
AN 1991:528528 CAPLUS
DN 115:128528
TI Method for **solubilization** and naturation of somatotropins utilizing low urea concentration

16/10/200316:24protein purification.trn

IN McCoy, Kevin Michael
PA American Cyanamid Co., USA
SO Eur. Pat. Appl., 10 pp.
CODEN: EPXXDW
DT Patent
LA English
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | EP 432419 | A1 | 19910619 | EP 1990-120309 | 19901023 |
| | EP 432419 | B1 | 19941019 | | |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE | | | | |
| | ES 2062253 | T3 | 19941216 | ES 1990-120309 | 19901023 |
| | IL 96124 | A1 | 19980615 | IL 1990-96124 | 19901025 |
| | JP 03181500 | A2 | 19910807 | JP 1990-331005 | 19901130 |
| | CA 2031369 | AA | 19910606 | CA 1990-2031369 | 19901203 |
| | FI 9005985 | A | 19910606 | FI 1990-5985 | 19901204 |
| | FI 97296 | B | 19960815 | | |
| | FI 97296 | C | 19961125 | | |
| | AU 9067736 | A1 | 19910613 | AU 1990-67736 | 19901204 |
| | AU 628695 | B2 | 19920917 | | |
| | ZA 9009745 | A | 19911030 | ZA 1990-9745 | 19901204 |
| | HU 58762 | A2 | 19920330 | HU 1990-8077 | 19901205 |
| | HU 214249 | B | 19980302 | | |
| PRAI | US 1989-446280 | | 19891205 | | |

L12 ANSWER 9 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB Transfection of the monkey COS-7 cells with an expression vector bearing the Lemma gibba LHCIIb AB30 or AB19 genes led to the synthesis of the LHCIIb polypeptide precursors (preLHCIIb). This was inferred mainly from Western blot anal. which has revealed the appearance of a single immunopptn. band following the use of 3 different prepns. of anti-LHCIIb antibodies. Synthesis of the precursor polypeptides, not the mature processed LHCIIb protein, was evident from the mol. wt. of the newly synthesized protein, inferred from its position in the gel. Expression of the AB30 and AB19 genes was also evident from the appearance of specific transcripts only in transfected cells. Immunofluorescence observations revealed the appearance of distinct fluorescent spots in about 1-2% of the transfected cells. The same was obsd. following immunogold staining and electron microscopy studies, which revealed a specific assocn. of gold particles with amorphous structures only in transfected cells. The preLHCIIb synthesized by transfected COS-7 cells was insol. in a variety of detergents and could be **solubilized** only by 8M urea or 0.1N **NaOH**. These properties are characteristic of proteins accumulating within **inclusion bodies** of prokaryotes.
AN 1991:56871 CAPLUS
DN 114:56871
TI Expression of plant genes in transfected mammalian cells: accumulation of recombinant preLHCIIb proteins within cytoplasmic **inclusion bodies**
AU Broido, S.; Loyter, A.; Vainstein, A.
CS Inst. Life Sci., Hebrew Univ. Jerusalem, Jerusalem, Israel
SO Experimental Cell Research (1991), 192(1), 248-55
CODEN: ECREAL; ISSN: 0014-4827
DT Journal
LA English

L12 ANSWER 10 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AB A 28,200-mol.-wt. protein was isolated from viral granules isolated from

the cabbage butterfly by **solubilization** in CO32--saline soln. (pH 10.95) or in 67% AcOH, followed by centrifugation and isoelec. focussing. **Solubilization** in alk. medium resulted in the formation of 4 polypetide fractions (mol. wts. 6000, 16,000, 19,500, and 60,300) which were apparently dimers and trimers of the 28,200-mol.-wt. protein. **Solubilization** in acidic medium produced 4 fractions with mol. wts. of 67,600, 87,100, 100,000, and 117,500. In 0.1N **NaOH**, the viral protein formed a single component with a sedimentation coeff. of 1.8 S and mol. wt. of 28,200 daltons. Amino acid anal. revealed 18 components, with aspartate, glutamate, and leucine as the major components.

AN 1984:206258 CAPLUS
DN 100:206258
TI Characteristics of proteins of granulosis viral **inclusion bodies** of the cabbage butterfly Pieris brassicae L (Lepidoptera:Pieridae)
AU Eglite, G.; Putnaerglis, E.
CS USSR
SO LLA Raksti (1983), 207, 54-60
CODEN: LLRADG; ISSN: 0233-917X
DT Journal
LA Russian

=> d bib ab 11-18

L12 ANSWER 11 OF 18 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1977:102851 CAPLUS
DN 86:102851
TI Mineral contents and chemical dissolution of the polyhedral **inclusion bodies** of the nucleopolyhedrosis virus of Amsacta albistriga Wlk
AU Narayanan, K.; Govindarajan, R.; Jayaraj, S.
CS Dep. Agric. Entomol., Tamil Nadu Agric. Univ., Coimbatore, India
SO Current Science (1977), 46(3), 82-3
CODEN: CUSCAM; ISSN: 0011-3891
DT Journal
LA English
AB Mineral anal. of polyhedral **inclusion bodies** (PIB) of A. albistriga nucleopolyhedrosis virus (NPV) revealed the presence of high concns. of Ca (1.6%), Fe (0.6%), K (0.2.8%), and Zn (0.2%), but low contents of Mg (0.05%), P (0.04%), Cu (0.02%), and Mn (0.025%). When treated with >0.2% KOH or **NaOH**, the PIB lost their refractile nature within 60 s and became black, dense, dot-like granules. The PIB were insol. in low concns. of alkali, salts, and org. solvents. No dissoln. was obsd. in 5-20% formalin even after 1 h of treatment.

L12 ANSWER 12 OF 18 MEDLINE on STN
AN 2003256635 IN-PROCESS
DN 22666169 PubMed ID: 12781978
TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli.
AU Liao Ming Juan; Zhu Mu Yuan; Zheng Xu; Zhang Zhi He; Zhang An Ju
CS State Key Laboratory of Plant Physiology and Biochemistry, College of Life Sciences, Zhejiang University, Hangzhou, 310012 PR China.
SO COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY. PART B, BIOCHEMISTRY AND MOLECULAR BIOLOGY, (2003 May) 135 (1) 109-16.
Journal code: 9516061. ISSN: 1096-4959.
CY England: United Kingdom

16/10/200316:24protein purification.trn

DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS IN-PROCESS; NONINDEXED; Priority Journals
ED Entered STN: 20030604
Last Updated on STN: 20030628
AB A cDNA encoding Ailuropoda melanoleuca growth hormone (AmGH) was isolated from pituitary total RNA using RT-PCR and expressed in Escherichia coli. This is the first report of a GH nucleotide and amino acid (aa) sequence from giant panda. The open reading frame of AmGH (651 bp) encodes a precursor of 216 aa comprising a 26 aa signal peptide and a 190 aa mature protein with four cysteine residues similar to the typical primary structure of mammalian GH precursor. AmGH shares a high degree of identity (54-98.9%) with that of mammals, birds and amphibians, but a very low identity with bony fish GH (only 20-30%). The mature AmGH exhibits striking similarity to that of putative ancestral GH with a difference of only two residues, indicating a very slow basal rate of molecular evolution. The DNA fragment encoding mature AmGH was then subcloned into the pGEX-4T-1 expression vector and highly expressed in E. coli host BL21 with IPTG induction. The expressed proteins fused to GST were found to be sequestered into **inclusion bodies** and therefore the **NaOH** method was employed to **solubilize** the **inclusion bodies**; the proteins were further purified by Glutathione Sepharose 4B affinity chromatography. The production and purification of GST-AmGH reported here provide a basis for further studies on the biological activity of AmGH.

L12 ANSWER 13 OF 18 MEDLINE on STN
AN 1999071977 MEDLINE
DN 99071977 PubMed ID: 9854813
TI Production of a biologically active novel goldfish growth hormone in Escherichia coli.
AU Mahmoud S S; Wang S; Moloney M M; Habibi H R
CS Department of Biological Sciences, University of Calgary, Alberta, Canada.
SO COMPARATIVE BIOCHEMISTRY AND PHYSIOLOGY. PART B, BIOCHEMISTRY AND MOLECULAR BIOLOGY, (1998 Aug) 120 (4) 657-63.
Journal code: 9516061. ISSN: 1096-4959.
CY ENGLAND: United Kingdom
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199901
ED Entered STN: 19990202
Last Updated on STN: 20000303
Entered Medline: 19990119
AB Goldfish pituitary contains two types of growth hormones. One with five cysteine residues (type-I) similar to other Cyprinid GHs, and the other with four Cys residues (type-II) similar to those of other fish and tertapod species. Recombinant goldfish type II GH (gfGH-II) was produced in Escherichia coli using the pRSETB expression vector. The gfGH-II was produced fused to a leader sequence, which sequestered into **inclusion bodies** after expression. The **inclusion bodies** were **solubilized** using **sodium hydroxide** and the fusion protein purified by chelating affinity chromatography. Subsequently, gfGH-II was cleaved and analyzed by Western blotting, using a specific antiserum. For comparison we also produced recombinant common carp GH (cGH) which has 95% similarity to gfGH-II, and tested their growth promoting activity in goldfish. Both forms of GH significantly increased the growth rate of goldfish ($P < 0.05$), although cGH was found to have a somewhat higher potency than

gfGH-II.

L12 ANSWER 14 OF 18 MEDLINE on STN
AN 91078373 MEDLINE
DN 91078373 PubMed ID: 1984416
TI Expression of plant genes in transfected mammalian cells: accumulation of recombinant preLHCIIb proteins within cytoplasmic **inclusion bodies**.
AU Broido S; Loyter A; Vainstein A
CS Department of Biological Chemistry, Hebrew University of Jerusalem, Israel.
SO EXPERIMENTAL CELL RESEARCH, (1991 Jan) 192 (1) 248-55.
Journal code: 0373226. ISSN: 0014-4827.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 199101
ED Entered STN: 19910322
Last Updated on STN: 19910322
Entered Medline: 19910130
AB Transfection of the monkey COS-7 cells with an expression vector bearing the Lemma gibba LHCIIb AB30 or AB19 genes led to the synthesis of the LHCIIb polypeptide precursors (preLHCIIb). This was inferred mainly from Western blot analysis which has revealed the appearance of a single immunoprecipitation band following the use of three different preparations of anti-LHCIIb antibodies. Synthesis of the precursor polypeptides, not the mature processed LHCIIb protein, was evident from the molecular weight of the newly synthesized protein, inferred from its position in the gel. Expression of the AB30 and AB19 genes was also evident from the appearance of specific transcripts only in transfected cells. Immunofluorescence observations revealed the appearance of distinct fluorescent spots in about 1-2% of the transfected cells. The same was observed following immunogold staining and electron microscopy studies, which revealed a specific association of gold particles with amorphous structures only in transfected cells. The preLHCIIb synthesized by transfected COS-7 cells was insoluble in a variety of detergents and could be **solubilized** only by 8 M urea or 0.1 N **NaOH**. These properties are characteristic of proteins accumulating within **inclusion bodies** of prokaryotes.

L12 ANSWER 15 OF 18 MEDLINE on STN
AN 74030839 MEDLINE
DN 74030839 PubMed ID: 4356630
TI Lead-induced **inclusion bodies**. **Solubility**, amino acid content, and relationship to residual acidic nuclear proteins.
AU Moore J F; Goyer R A; Wilson M
SO LABORATORY INVESTIGATION, (1973 Nov) 29 (5) 488-94.
Journal code: 0376617. ISSN: 0023-6837.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 197401
ED Entered STN: 19900310
Last Updated on STN: 19970203
Entered Medline: 19740116

L12 ANSWER 16 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN

16/10/200316:24protein purification.trn

AN 2003:373123 BIOSIS
DN PREV200300373123
TI cDNA cloning of growth hormone from giant panda (Ailuropoda melanoleuca) and its expression in Escherichia coli.
AU Liao, Ming Juan; Zhu, Mu Yuan (1); Zheng, Xu; Zhang, Zhi He; Zhang, An Ju
CS (1) State Key Laboratory of Plant Physiology and Biochemistry, College of Life Sciences, Zhejiang University, Hangzhou, 310012, China: lsczhumy@mail.hz.zj.cn China
SO Comparative Biochemistry and Physiology Part B Biochemistry & Molecular Biology, (May 2003, 2003) Vol. 135B, No. 1, pp. 109-116. print.
ISSN: 1096-4959.
DT Article
LA English
AB A cDNA encoding Ailuropoda melanoleuca growth hormone (AmGH) was isolated from pituitary total RNA using RT-PCR and expressed in Escherichia coli. This is the first report of a GH nucleotide and amino acid (aa) sequence from giant panda. The open reading frame of AmGH (651 bp) encodes a precursor of 216 aa comprising a 26 aa signal peptide and a 190 aa mature protein with four cysteine residues similar to the typical primary structure of mammalian GH precursor. AmGH shares a high degree of identity (54-98.9%) with that of mammals, birds and amphibians, but a very low identity with bony fish GH (only 20-30%). The mature AmGH exhibits striking similarity to that of putative ancestral GH with a difference of only two residues, indicating a very slow basal rate of molecular evolution. The DNA fragment encoding mature AmGH was then subcloned into the pGEX-4T-1 expression vector and highly expressed in E. coli host BL21 with IPTG induction. The expressed proteins fused to GST were found to be sequestered into **inclusion bodies** and therefore the **NaOH** method was employed to **solubilize** the **inclusion bodies**; the proteins were further purified by Glutathione Sepharose 4B affinity chromatography. The production and purification of GST-AmGH reported here provide a basis for further studies on the biological activity of AmGH.

L12 ANSWER 17 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1999:8909 BIOSIS
DN PREV199900008909
TI Production of a biologically active novel goldfish growth hormone in Escherichia coli.
AU Mahmoud, Soheil S.; Wang, Shuli; Moloney, Maurice M.; Habibi, Hamid R. (1)
CS (1) Dep. Biological Sci., Univ. Calgary, Calgary, AB T2N 1N4 Canada
SO Comparative Biochemistry and Physiology B, (Aug., 1998) Vol. 120, No. 4, pp. 657-663.
ISSN: 0305-0491.
DT Article
LA English
AB Goldfish pituitary contains two types of growth hormones. One with five cysteine residues (type-I) similar to other Cyprinid GHs, and the other with four Cys residues (type-II) similar to those of other fish and tertapod species. Recombinant goldfish type II GH (gfGH-II) was produced in Escherichia coli using the pRSETB expression vector. The gfGH-II was produced fused to a leader sequence, which sequestered into **inclusion bodies** after expression. The **inclusion bodies** were **solubilized** using **sodium hydroxide** and the fusion protein purified by chelating affinity chromatography. Subsequently, gfGH-II was cleaved and analyzed by Western blotting, using a specific antiserum. For comparison we also produced recombinant common carp GH (cGH) which has 95% similarity to gfGH-II, and tested their growth promoting activity in goldfish. Both forms of GH

significantly increased the growth rate of goldfish ($P < 0.05$), although cGH was found to have a somewhat higher potency than gfGH-II.

L12 ANSWER 18 OF 18 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC. on STN
AN 1991:113756 BIOSIS
DN BA91:61146
TI EXPRESSION OF PLANT GENES IN TRANSFECTED MAMMALIAN CELLS ACCUMULATION OF RECOMBINANT PRE-LHCIIB PROTEINS WITHIN CYTOPLASMIC **INCLUSION BODIES**.
AU BROIDO S; LOYTER A; VAINSTEIN A
CS DEP. HORTICULTURE, FAC. AGRIC., HEBREW UNIV. JERUSALEM, P.O. BOX 12, REHOVOT 76100, ISRAEL.
SO EXP CELL RES, (1991) 192 (1), 248-255.
CODEN: ECREAL. ISSN: 0014-4827.
FS BA; OLD
LA English
AB Transfection of the monkey COS-7 cells with an expression vector bearing the Lemma gibba LHCIIb AB30 or Ab19 genes led to the synthesis of the LHCIIb polypeptide precursors (preLHCIIb). This was inferred mainly from Western blot analysis which has revealed the appearance of a single immunoprecipitation band following the use of three different preparations of anti-LHCIIb antibodies. Synthesis of the precursor polypeptides, not the mature processed LHCIIb protein, was evident from the molecular weight of the newly synthesized protein, inferred from its position in the gel. Expression of the AB30 and AB19 genes was also evident from the appearance of specific transcripts only in transfected cells. Immunofluorescence observations revealed the appearance of distinct fluorescent spots in about 1-2% of the transfected cells. The same was observed following immunogold staining and electron microscopy studies, which revealed a specific association of gold particles with amorphous structures only in transfected cells. The preLHCIIb synthesized by transfected COS-7 cells was insoluble in a variety of detergents and could be **solubilized** only by 8 M urea or 0.1 N **NaOH**. These properties are characteristic of proteins accumulating within **inclusion bodies** of prokaryotes.

=> log y

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